

## **Title 17**

### **GRADING**

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## **Chapter 17.04**

### **PURPOSE AND INTENT**

#### **Section:**

#### **17.04.010 Purpose and Intent.**

##### **Section 17.04.010 Purpose and Intent.**

This title sets forth rules and regulations intended to further implement the goals and objectives of the General Plan, to control evacuation, grading and earthwork construction, including fills and embankments. It also establishes the administrative procedures for grading plan approval, issuance of permits, inspections, and establishes penalties for unauthorized grading activity. The purpose of this title is to protect life, limb, property, the public welfare and the physical environment by regulating grading on private property. It is further the purpose of this title to regulate hillside and arroyo grading in a manner which minimizes the adverse effects of grading on natural landforms, soil erosion, dust control, water runoff and construction equipment emissions. The required review of hillside/arroyo grading includes regulations to:

A. Ensure that significant natural characteristics such as land form, vegetation, wildlife communities, scenic qualities, and open space can substantially be maintained; to preserve unique and significant geologic; biologic and hydrologic features of public value; to encourage alternative approaches to conventional hillside construction practices by achieving land use patterns and intensities that are consistent with the natural characteristics of hill areas such as slope, landform vegetation, and scenic quality.

B. Maintain the identity, image and environmental quality of the City; and to achieve land use densities that are in keeping with the General Plan.

C. Minimize the visual impact of grading.

D. Minimize grading which relates to the natural contour of the land, and which will round off, in a natural manner, sharp angles at the top and ends of cut and fill slopes, and which does not result in a staircase or padding affect.

E. Stabilize steep hillsides, retain moisture, prevent erosion, and enhance the natural scenic beauty and, where necessary, require additional landscaping to enhance the scenic and safety qualities of the hillsides. This could include the retention of trees or replacement of trees and other vegetation.

F. Encourage a variety of building types and design, when appropriate, to materially reduce grading and disturbance of the natural character of the area.

G. Preserve and enhance existing community character, as defined by such factors as visual appearance, density, road widths and vegetation.

H. Preserve prominent landforms within the community, including, but not limited to ridgelines, knolls, valleys, creeks, rock outcroppings or other unique topographic features or viewsapes.

I. Preserve major hillsides viewsapes visible from points within the city so that they are not detrimentally altered by the intrusion of highly visible cut and/or fill slopes, building lines and/or road surfaces.

J. Scrutinize development in areas of exposure to high fire risk and develop reasonable mitigation measures to reduce such risk. (Ord. 6453 § 1, 1998)

## **Chapter 17.08**

### **DEFINITIONS**

#### **Sections:**

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| <b>17.08.010</b> | <b>Definitions.</b>                                  |
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| <b>17.08.095</b> | <b>Excavation.</b>                                   |
| <b>17.08.100</b> | <b>Fill.</b>   |
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| <b>17.08.120</b> | <b>Hillside/Arroyo.</b>                              |
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| <b>17.08.145</b> | <b>Straight-line Slope.</b>                          |
| <b>17.08.150</b> | <b>Average Natural Slope.</b>                        |
| <b>17.08.155</b> | <b>Soil.</b>   |
| <b>17.08.160</b> | <b>Soils Engineer (Geotechnical Engineer).</b>       |
| <b>17.08.165</b> | <b>Soils Engineering (Geotechnical Engineering).</b> |
| <b>17.08.170</b> | <b>Terrace.</b>                                      |

#### **Section 17.08.010 Definitions.**

For the purposes of this title, the following definitions shall be applied: (Ord. 6453 § 1, 1998)

#### **Section 17.08.011 Arroyo**

"Arroyo" shall mean those areas shown within the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F of this Title. The limits of these arroyos and arroyo tributaries shall include all the land within the water course area, the adjacent slopes having an average natural slope of 30% or greater, and all other areas within the boundaries shown on Exhibits A-F of this Title. (Ord. 6673 § 1, 2003)

#### **Section 17.08.015 Approval.**

"Approval" shall mean the proposed work or completed work conforms to this section in the opinion of the Public Works Director. (Ord. 6453 § 1, 1998)

#### **Section 17.08.020 As-graded.**

"As-graded" is the extent of surface conditions upon completion of grading. (Ord. 6453 §

1, 1998)

**Section 17.08.025 Bedrock.**

"Bedrock" is in-place solid rock. (Ord. 6453 § 1, 1998)

**Section 17.08.030 Bench.**

"Bench" is a relatively level step excavated into earth material on which fill is to placed. (Ord. 6453 § 1, 1998)

**Section 17.08.090 Erosion.**

"Erosion" is the wearing away of the ground surface by the movement of wind, water and/or ice. (Ord. 6453 § 1, 1998)

**Section 17.08.095 Excavation.**

"Excavation" is the mechanical removal of earth material. (Ord. 6453 § 1, 1998)

**Section 17.08.100 Fill.**

"Fill" is a deposit of earth material placed by artificial means. (Ord. 6453 § 1, 1998)

**Section 17.08.105 Grade.**

"Grade" is the vertical location of the ground surface.

A. "Existing Grade" is the grade prior to grading.

B. "Rough Grade" is the stage at which the grade approximately conforms to the approved grade.

C. "Finish Grade" is the final grade of the site which conforms to the approved plan. (Ord. 6453 § 1, 1998)

**Section 17.08.110 Graded Area.**

"Graded Area" is that portion of a site on which grading is proposed. The graded area includes the building pad and any slopes created by excavation or fill. Driveway grading which is required to provide access to the level building pad area is not included as part of the total permitted level pad area. (Ord. 6673 § 2, 2003; Ord. 6453 § 1, 1998)

**Section 17.08.115 Grading.**

"Grading" is any excavating, filling, or combination thereof. (Ord. 6453 § 1, 1998)

**Section 17.08.120 Hillside/Arroyo.**

"Hillside/Arroyo" is a situation wherein one or more of the following conditions exist:

A. The site lies within the RC-Residential Conservation Zone;

B. The area to be graded has a straight-line slope of ten percent or greater;

C. The site lies within or adjacent the boundaries of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, and Springbrook Arroyos, a blue line stream identified on the United States Geological Survey (USGS) Maps or other significant arroyos. (Ord. 6453 § 1, 1998)

**Section 17.08.125 Key.**

"Key" is a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope. (Ord. 6453 § 1, 1998)

**Section 17.08.130 Regular grading.**

"Regular Grading" is any grading other than defined as "Engineered Grading". (Ord. 6453 § 1, 1998)

**Section 17.08.135 Site.**

"Site" is any lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted. (Ord. 6453 § 1, 1998)

**Section 17.08.140 Slope.**

"Slope" is an inclined ground surface the inclination of which is commonly expressed as a ratio of horizontal distance to vertical distance (eg: two to one, one-point five to one, etc.) (Ord. 6453 § 1, 1998)

**Section 17.08.145 Straight-line Slope.**

"Straight-line Slope" is the vertical rise or fall of the existing grade measured between two points which is expressed as a percentage (eg: ten percent slope, fifteen percent slope, etc.) (Ord. 6453 § 1, 1998)

**Section 17.08.150 Average Natural Slope.**

"Average Natural Slope" is the slope determined pursuant to the City of Riverside's adopted Average Natural Slope Formula specified in Title 19.04.038 of the Municipal Code, as follows: 'Average Natural Slope' means the average natural inclination of the ground surface of a lot or parcel expressed as a percent and as measured by the following formula:

$$\frac{S=0.002296 \times I \times L}{A}$$

Where: S=average natural slope in percent

I=natural contour interval in feet

L=length of natural contours in feet

A=acres of property (parcel of record existing on November 13, 1979)

0.002296=constant which converts square feet into acres and expresses slope in percent.

The average natural slope shall be computed from photogrammetric maps, grading permit plans and other data or evidence approved by the Public Works Department (Ord. 5585 1,1987; Ord. 6453 § 1, 1998)

**Section 17.08.155 Soil.**

"Soil" is naturally occurring superficial deposits overlying bedrock. (Ord. 6453 § 1, 1998)

**Section 17.08.160 Soils Engineer (Geotechnical Engineer).**

"Soils Engineer (Geotechnical Engineer)" is an engineer, registered in the State of California, and experienced and knowledgeable in the practice of soils engineering (geotechnical engineering.) (Ord. 6453 § 1, 1998)

**Section 17.08.165 Soils Engineering (Geotechnical Engineering).**

"Soils Engineering (Geotechnical Engineering)" is the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and/or testing of the construction thereof. (Ord. 6453 § 1, 1998)

**Section 17.08.170 Terrace.**

"Terrace" is a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes. (Ord. 6453 § 1, 1998)

## Chapter 17.12

### APPLICABILITY

#### Sections:

|                  |  |
|------------------|--|
| <b>17.12.010</b> | <b>Applicability.</b>                                  |
| <b>17.12.020</b> | <b>Applicability - Hillside/Arroyo Grading.</b>        |
| <b>17.12.030</b> | <b>Review required.</b>                                |
| <b>17.12.040</b> | <b>Approval date.</b>                                  |
| <b>17.12.050</b> | <b>Watercourse/channel alteration review required.</b> |
| <b>17.12.060</b> | <b>Determination of hazard.</b>                        |

#### **Section 17.12.010    Applicability.**

Applicability. No person shall do any grading upon any lot, parcel or tract of land without first having obtained a grading permit from the Public Works Director in compliance with all the provisions of this title except that a grading permit shall not be required for any of the following:

A. An excavation below finished grade for the basements and footings of a building, a retaining wall, a pool, or other structure authorized by a valid building permit. This provision shall not exempt any fill made with the material from such excavation nor exempt any excavation having an unsupported height greater than five feet after the completion of such structure.

B. Cemetery graves.

C. Refuse disposal sites controlled by other regulations.

D. Excavations and embankments performed by a public utility, governmental agency, or private developer for the construction of roadways, pipelines or utility lines within rights-of-ways or easements. Any work done in a public right-of-way dedicated to the City shall be regulated by the Public Works Director.

E. Mining, quarrying, excavating, processing, stockpiling of rock, sand, gravel, aggregate or clay where established and operating under the applicable provisions of this Chapter, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property as verified by a civil engineer's report.

F. Exploratory excavations under the direction of soils engineers or engineering geologists.

G. An excavation which:

1. Is less than two feet in depth; or

2. Does not create a cut slope greater than five feet in height and steeper than two horizontal to one vertical.

H. A fill less than 3 feet in depth and placed on natural terrain with a slope flatter than five horizontal to one vertical, not intended to support structures, which does not exceed fifty cubic yards on any one lot, including spoil from foundation excavation, and does not obstruct a drainage course. Lot drainage on the subject lot shall be directed away from any structure.

I. Emergency work as authorized by the City necessary to protect life, limb or property or to maintain the safety, use or stability of a public right-of-way or drainage course.

J. Common agricultural practices on agriculturally zoned or agriculturally designated lands.

K. Grading in an isolated, self-contained area if there is no danger apparent to private or public property, the site is not within a drainage area or arroyo, it does not contain slopes exceeding ten percent and it is not visible from the public right-of-way.

L. Lots or projects having less than one acre in total area and which meet the conditions of Sections 17.12.010 G. 1. and 17.12.010 H. and certification is provided by the engineer subject to the approval of the Public Works Department. (Ord. 6673 §§ 3, 4, 2003; Ord. 6453 § 1, 1998)

**Section 17.12.020    Applicability - Hillside/Arroyo Grading.**

Applicability - Hillside/Arroyo Grading. The provisions for hillside/arroyo grading as defined in Section 17.28.020 of this title shall apply to all excavation and grading of any land if any one of the following criteria apply to the property in question:

- A. The property is in the RC - Residential Conservation Zone.
- B. The property has an average natural slope ten percent or greater.
- C. The property is within or is adjacent to the boundaries of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, and Springbrook Arroyos. Blue line streams identified on the United States Geological Survey (USGS) Maps or other significant arroyos may also be included. (Ord. 6453 § 1, 1998)

**Section 17.12.030    Review required.**

A grading permit in hillside/arroyo areas as defined in Chapter 17.08 of this title shall not be issued until review procedures and requirements established under Chapter 17.28 are met. (Ord. 6453 § 1, 1998)

**Section 17.12.040    Approval date.**

Any approved or tentatively approved tract or parcel map having a grading plan approved prior to July 1, 1997 shall be subject to the grading requirements in effect on the approval date of the map (Ord. 6453 § 1, 1998)

**Section 17.12.050    Watercourse/channel alteration review required.**

Notwithstanding other provisions of this title, no person shall alter an existing watercourse or channel through excavation, placement of fill or rock, or structural improvements without first obtaining a grading permit. (Ord. 6453 § 1, 1998)

**Section 17.12.060    Determination of hazard.**

Whenever the Public Works Director determines that any existing excavation, embankment, or fill on private property has become a hazard to life, limb, a danger to property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice from the Public Works Director, shall within the period specified therein repair or eliminate such excavation or embankment so as to eliminate the hazard and be in conformance with the requirements of this title. Failure to eliminate the hazard in the specified time period shall be cause for the Public Works Director to initiate the enforcement/penalties procedures specified in Section 17.36.010. (Ord. 6453 § 1, 1998)



## Chapter 17.16

### GRADING PERMIT APPLICATION REQUIREMENTS

#### Sections:

**17.16.010      Grading permit application requirements.**

**17.16.020      Drawings required.**

#### **Section 17.16.010      Grading permit application requirements.**

Application requirements. All applications for a grading permit shall be accompanied by the following items. Numbers of copies of each item shall be as determined by the Public Works Director and the Planning Director.

A. All grading plans, including an interim erosion control plan;

B. Preliminary soils report as prepared by a registered soils engineer (geotechnical engineer), unless waived by the Public Works Director. The recommendations specified in the report shall be incorporated into the design of the grading plan. All soils engineers (geotechnical engineers) performing work within the City shall have a current City Business Tax Certificate.

C. Payment of a grading plan review fee as specified in the current Fees and Charges Resolution.

D. Form FG 2023 as filed with the California Department of Fish and Game, if the proposed grading involves alteration of or discharge into a blue line stream as identified on the topographic Quad Maps prepared by the U.S. Geological Services.

E. For construction activity that includes clearing, grading or excavation that results in the disturbance of at least one (1) acre, the following is also required by the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges associated with Construction Activity:

1. A Notice of Intent (NOI) must be submitted to the State Water Board. The NOI must be sent to the following State Agency:

California State Water Resources Control Board, Division of Water Quality/Storm Water Permit Unit

A grading permit will not be issued until verification is provided that the NOI has been submitted to the State Water Board.

2. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented concurrent with the commencement of grading/clearing activities.

F. Documentation of New Development Best Management Practices (BMPs) required by the Riverside County Drainage area Management Plan to identify and control post-construction/discharge of pollutants to the Waters of the United States. Copies available at the Public Works Department. (Ord 6673 § 5, 2003; Ord. 6453 § 1, 1998)

#### **Section 17.16.020      Drawings required.**

Prior to submitting an application for hillside/arroyo review the applicant shall submit drawings to the Planning Department for preliminary staff review to determine compliance of the proposed grading with specific hillside objectives and guidelines included in Chapter 17.28 to identify specific site concerns and problems at the earliest possible stage, to help reduce the chance of problems causing delays later in the approval process, and to facilitate the coordination of issues and concerns of individual City departments.

## **Chapter 17.20**

### **INFORMATION ON PLANS AND SPECIFICATIONS**

#### **Sections:**

**17.20.010 Registered Engineer/Architect.**

**17.20.020 Detailed plans required.**

#### **Section 17.20.010 Registered Engineer/Architect.**

All grading plans shall be signed by a registered civil engineer with a current City Business Tax Certificate, except that plans proposing regular grading involving less than 5,000 cubic yards may be signed by a registered architect or registered landscape architect with a current City Business Tax Certificate. (Ord. 6453 § 1 (part), 1998)

#### **Section 17.20.020 Detailed plans required.**

Plans shall be drawn to scale upon substantial paper or other suitable material and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail conformance to the provisions of this title and all relevant laws, ordinances, rules and regulations. The plans shall include the following information:

A. Printed name, address, registration number and phone number of engineer or architect. The plans, if signed by a civil engineer, shall also bear the seal or stamp of the civil engineer and the expiration date of the certificate or authority.

B. Printed name, address and phone number of the property owner.

C. Title block showing the property address and/or assessor parcel numbers.

D. North arrow and scale of plan.

E. General vicinity map of the proposed site.

F. The estimated volume, in cubic yards, of cut and/or fill, including the proposed disposition of any excess cut material. Excess dirt moved outside City limits shall comply with the applicable regulations and requirements of the jurisdiction it is moved to. Any location within the City of Riverside used for disposal of excess cut material shall require separate Grading Plan review and issuance of a separate grading permit for that site.

G. Property limits and accurate contours of existing grade and details of terrain and area drainage. Existing contours shall be shown as broken (dashed) lines properly identified on the plan and extended a minimum of twenty five feet beyond the perimeter of the property.

H. All buildings, trees, rock outcroppings and structures on-site and on adjacent lots within fifteen feet of the perimeter of the property. The effect the proposed grading will have on adjacent properties (cuts, fills, drainage, etc.) shall also be shown.

I. Proposed final grades along with all cut and fill slopes. Slopes shall be clearly designated on plans with slope ratio (H:V) shown. The contours of all new grading may be required to be shown with solid lines.

J. Details of all proposed on-site drainage structures, walls, cribbing, surface protection or other facilities.

K. Planning Department signature block.

L. A list of the numbers of any related City case files.

M. All additional notes specified by the Public Works Department. (Form #CL435, available at the Public Works Department.)

N. All additional notes regarding dust/erosion control as listed in Section G of this chapter.

## **Chapter 17.24**

### **FEES/BONDS/DEPOSITS**

#### **Section:**

#### **17.24.010 Fees/Bonds/Deposits.**

##### **Section 17.24.010 Fees/Bonds/Deposits.**

Fees/bonds/deposits. Fees shall be assessed in accordance with the fee schedule adopted under the current Fees and Charges Resolution.

A. Grading plan review fees. The applicant shall pay the plan review fee prior to acceptance of plans for checking by the City. If the earthwork quantities increase substantially or the plan changes substantially, additional fees may be charged for additional review required, as determined by the Public Works Director. Separate plan review fees shall also apply to retaining walls and major drainage structures.

B. Grading permit fees. The applicant shall pay a grading permit fee prior to issuance of a grading permit by the City. Should the permitted grading work be revised and the scope of the work or quantity of earth moved be substantially changed, additional permit fees may be required for additional review required, as determined by the Public Works Director. Separate permits and fees shall apply to retaining walls or major drainage structures.

C. Fees for unauthorized grading activity. Whenever grading operations are commenced which are not in conformance with or are without an approved grading permit, as required in Chapter 17.12, the applicable grading fee shall be treble the amount of the regular grading fee. The payment of such additional fee shall not exempt any person from compliance with the provisions of this grading ordinance nor from any other penalty prescribed by law (See Chapter 17.36).

D. Bonds/developer's deposit. The Public Works Director may require bonds in such form and amounts as may be deemed necessary to assure that the work, if not completed on accordance with the approved plans and specifications, will be corrected to eliminate hazardous conditions. In lieu of a surety bond the applicant may file a cash bond or instrument of credit with the Public Works Director in an amount to that which would be required in the surety bond. (Ord. 6453 § 1, 1998)

## Chapter 17.28

### MINIMUM GRADING STANDARDS AND GENERAL REQUIREMENTS

#### Sections:

- 17.28.010      General Requirements.**
- 17.28.020      Hillside/Arroyo Grading.**
- 17.28.030      Dust Control/Erosion Control/Landscaping.**

#### **Section 17.28.010      General Requirements.**

General Requirements. The following standards and general requirements shall apply to all grading requiring a grading permit. In addition to the minimum standards which apply to all grading, supplementary regulations which apply to grading of hillsides and arroyos are also included.

##### **A. Cuts.**

1. General. Unless otherwise recommended in the approved soils engineering and/or engineering geology report, cuts shall conform to the provisions of this Section. In the absence of an approved soils engineering report, these provisions may be waived for minor cuts not intended to support structures.

2. Slope. The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two horizontal to one vertical (2:0) unless the owner furnishes a soils engineering or an engineering geology report, or both, stating that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to the public or private property and is consistent with the overall landform grading. The Public Works Director shall have the ultimate decision as to whether a slope steeper than 2:1 may be permitted.

3. Drainage and terracing shall be provided as required in Chapter 17.28.

##### **B. Fills.**

1. General. Unless otherwise recommended in the approved soils engineering and/or engineering geology report, fills shall conform to the provisions of this Section. In the absence of an approved soils engineering report, these provisions may be waived for minor fills not intended to support structures.

2. Preparation of ground. The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials, scarifying to provide a bond with the new fill and, where slopes are steeper than five to one and the height is greater than five feet, by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of a fill on a slope steeper than five to one shall be at least ten feet wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least ten feet wide but the cut shall be made before placing the fill and the acceptance by the soils engineer or engineering geologist or both as a suitable foundation for fill.

3. Fill material. Detrimental amounts of organic materials shall not be permitted in fills. Except as permitted by the Public Works Director, no rock or similar irreducible material with a maximum dimension greater than twelve inches shall be buried or placed in fills.

a. Exception. The Public Works Director may permit placement of larger rock when the soils engineer properly devises a method of placement and approves the fill stability. The following conditions shall also apply.

i. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.

ii. Rock sizes greater than twelve inches in maximum dimension shall be ten feet or more below grade, measured vertically.

iii. Rocks shall be placed so as to assure filling all voids with fines.

4. Compaction. All fills shall be compacted to a minimum of ninety percent of maximum density as determined by UBC Standard No. 70-1. In-place density shall be determined in accordance with recognized current ASTM standards for determining in-place density of soils. After ninety percent compaction has been obtained, those areas of the graded site that will not be built upon may be sacrificed to promote the growth of landscaping, improve irrigation and reduce drainage problems.

5. Slope. The slope of fill surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two horizontal to one vertical (2:1) unless the owner furnishes a soils engineer or an engineering geology report, or both, stating that the site has been investigated and giving an opinion that a fill at a steeper slope will be stable and not create a hazard to public property and is consistent with the overall landform grading. The Public Works Director shall have the ultimate decision as to whether a slope steeper than 2:1 may be permitted.

6. Drainage and Terracing. Drainage and terracing shall be provided and the area above fill slopes and the surfaces of terraces shall be graded and paved as required by Section 17.28.010E.

#### C. Retaining walls.

1. Retaining walls constructed of materials architecturally consistent with the development may be permitted in lieu, or in combination with cut or fill slopes. Retaining or crib walls in an area not open to public view are permitted up to six feet in height unless a higher wall is approved administratively. Retaining or crib walls exposed to public view shall not exceed three feet in height unless approved administratively and shall be included as part of the permitted height of the slope.

#### D. Setbacks.

1. General. Cut and fill slopes shall be setback from site boundaries in accordance with this Section. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions shall be as shown in attached Figure #1.

2. Top of cut slope. The top of cut slopes shall be made not nearer to a site boundary line than one fifth of the vertical height of cut with a minimum of two feet and a maximum of ten feet. The setback may need to be increased for any required interceptor drains.

3. Toe of fill slope. The toe of fill slope shall be made not nearer to the site boundary line than one half the height of the slope with a minimum of two feet and a maximum of twenty feet. Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work, as the Public Works Director deems necessary, to protect the adjoining property from damage as a result of such grading. These precautions may include but are not limited to:

a. Additional setbacks.

b. Provision for retaining or slough walls.

c. Mechanical or chemical treatment of the fill slope surface to minimize erosion.

d. Provisions for the control of surface water.

4. Modification of slope location. The Public Works Director may approve alternate setbacks. The Public Works Director may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate that the intent of this Section has been satisfied.

#### E. Drainage and terracing.

1. General. Unless otherwise indicated on the approved grading plan, drainage facilities

shall conform to the provisions of this Section for cut or fill slopes steeper than three horizontal to one vertical.

2. Terraces.

a. Terraces of at least six feet in width shall be established at not more than thirty-foot vertical intervals on all cut or fill slopes to control surface drainage and debris except that where only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than sixty feet and up to one hundred twenty feet in vertical height, one terrace at approximately mid-height shall be twelve feet in width. Terrace widths and spacing for cut and fill slopes greater than one hundred twenty feet in height shall be designed by the civil engineer and approved by the Public Works Director. Suitable access shall be provided to permit proper cleaning and maintenance.

b. Swales or ditches on terraces shall have a minimum gradient of five percent and must be paved with reinforced concrete not less than three inches in thickness or an approved equal paving. They shall have a minimum depth at the deepest point of one foot and minimum paved width of five feet.

c. A single run of swale or ditch shall not collect runoff from a tributary area exceeding thirteen thousand five hundred square feet (projected) without discharging into a downdrain.

3. Subsurface drainage. Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.

4. Disposal. All drainage facilities shall be designed to carry water to the nearest practicable drainage way approved by the Public Works Director and/or other appropriate jurisdiction as a safe place to deposit such water. Erosion of ground in the area of discharge shall be prevented by installation of nonerosive downdrains or other devices.

Building pads shall have a drainage gradient of two percent toward approved drainage facilities, unless waived by the Public Works Director.

EXCEPTION: the gradient from the building pad may be one percent if all of the following conditions exist throughout the permit area:

a. No proposed fills are greater than ten feet in maximum depth.

b. No proposed finish cut or fill slope faces have a vertical height in excess of ten feet.

c. No existing slope faces, which have a slope face steeper than ten horizontally to one vertically, have a vertical height in excess of ten feet.

5. Interceptor drains. Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes toward the cut and has a drainage path greater than forty feet measured horizontally. Interceptor drains shall be paved with a minimum of three inches of reinforced concrete or gunite. They shall have a minimum depth of twelve inches and a minimum width of thirty inches measured horizontally against the drain. The slope of drains shall be as approved by the Public Works Director.

F. Excavation blasting.

1. General. No person shall do any excavation blasting without a permit from the Fire Chief. The application for such permit shall be on forms prescribed by the Fire Chief. Before the issuance of such a permit the Fire Chief may require a grading permit issued by the Public Works Department. Any conditions contained in the grading permit shall become conditions of the excavation blasting permit.

2. Authority. The Fire Chief is designated as the issuing authority for the City of Riverside in accordance with, and for the purposes designated in Section 12007 of the Health and Safety Code of the State of California.

3. Fees. The application shall be accompanied by the current fee.

4. Requirements and Conditions. In so far as applicable, the provisions of this Chapter relating to conditions in permits, procedure and the like matters shall govern excavation blasting permits, but the Fire Chief shall continue to enforce all applicable laws on blasting under his jurisdiction.

5. Appeal. Any person aggrieved by the action of the Fire Chief in denying or revoking

a permit required by this article for failure to meet or to comply with the provisions of this article or upon the grounds set forth in the California Fire Prevention Code and California Code of Regulations, Title 19 may appeal to the City Council within ten days after the respective decision is made.

G. Interpretation of standards.

1. If an ambiguity arises concerning the interpretation of the provisions for minimum grading standards or any general requirements contained in this Chapter, the Zoning Administrator shall make a determination of what constitutes compliance with the provisions contained within the applicable section. The Zoning Administrator may also refer the matter to the Planning Commission for consideration. The Zoning Administrator shall take action pursuant to this Section within working ten days of the date of a written request for interpretation.

H. Inspection.

1. General.

a. All grading operations for which a permit is required shall be subject to inspection. For projects involving both regular and engineered grading the permittee's civil engineer, architect or landscape architect and soils engineer as listed on the grading permit shall inspect and certify the grading.

b. When the Public Works Director has cause to believe that special conditions or unusual hazards or geologic factors may be involved in a "regular grading" operation it will be required to conform to "engineered grading" requirements.

2. All grading. The permittee's civil engineer, architect, landscape architect, or soils engineer shall inspect grading at the following stages of work and shall provide written notice of approval at each stage of review to the Public Works Director:

a. Rough grading stage. When rough grading has been completed and approximate final elevations have been established for building pads, drainage devices, and paved areas, and when temporary erosion control measures have been installed. This will be required for building permit issuance.

b. Final grading stage. When all grading has been completed including final building pads, completed drainage devices, and permanent erosion control facilities, including slope planting and irrigation systems as required. This is required for release of utilities and certificate of occupancy.

3. Planning Department inspection. At the discretion of the Planning Director, the Planning Department may also inspect engineered grading for compliance with conditions of approval which may include, but are not limited to, slope ratio, slope height, slope location, contour grading, areas of land disturbance, archaeology, paleontology, landscaping, erosion control, protection of native plants and animals, or other conditions of approval relating to environmental or aesthetic concerns. The Planning Department shall file reports with the Public Works Director as required by the Public Works Director. Grading other than engineered grading shall be designated "Regular Grading".

4. Notification of noncompliance. If, in the course of fulfilling their responsibility under this Chapter, the civil engineer, soils engineer, engineering geologist, testing agency, Public Works Department and/or Planning Department finds that the work is not being done in conformance with this Chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee, the permittee's civil engineer and to the Public Works Director. It will be the permittee's civil engineer's responsibility to devise appropriate corrective measures.

5. Transfer of responsibility for approval. If the civil engineer, the soils engineer, the engineering geologist, or the testing agency of record resigns or is unable to perform his/her duties during the course of the work, the work shall be stopped until a replacement has agreed to accept responsibility for the work of the predecessor. The applicant shall provide the City

with the names of the civil engineer, soils engineer, engineering geologist or the testing agency for the project.

6. Approved plans and copy of a valid grading permit shall be located on the site at all times while work is being performed.

I. Completion of work.

1. Final reports. Upon completion of grading work the Public Works Director shall require the following reports, drawings and supplements thereto:

a. An as-graded plan prepared by the civil engineer including original ground surface elevations, as-graded ground surface elevations, lot drainage patterns, and locations and elevations of all surface and subsurface drainage facilities. The civil engineer shall state that to the best of his or her knowledge the work was done in accordance with the final approved grading plan.

b. A soils-grading report prepared by the soils engineer, including locations and elevations of field density tests, summaries of field and laboratory tests, data and comments on any changes made during grading including their effect on the recommendations made during grading and their effect on the recommendations made in the soils engineering investigation report. The report shall also include a finding as to the adequacy of the site for the intended use.

c. A geologic grading report, if necessary, prepared by the engineering geologist, including a final description of the geology of the site and any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan. The report shall also include a finding as to the adequacy of the site for the intended use as affected by geologic factors.

2. Notice of Completion. The as-graded plan and certifications as required in Section 17.28.010 I.1. shall constitute the Notice of Completion. The Public Works Director may make a final inspection to ensure that the installation of all drainage facilities and their protective devices, landscaping and irrigation and all erosion-control measures have been completed in accordance with the final approved grading plan prior to releasing utilities or certificate of occupancy for improvements on the site. (Ord. 6453 § 1, 1998)

### **Section 17.28.020 Hillside/Arroyo Grading.**

Hillside/Arroyo Grading. The following supplementary regulations shall apply to the grading of hillsides and arroyos.

A. Grading requirements. Where grading is proposed on any parcel having an average natural slope of ten percent or greater, or which is zoned Residential Conservation (RC), or which is located within or adjacent to the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos, or a blue line stream identified on USGS Maps, or other significant arroyo, the grading must be confined per this Chapter and limited to the minimum grading necessary to provide for a house, driveway, garage and limited level yard. The ungraded terrain must be left in its natural form for the remainder of the site. All hillside/arroyo grading shall conform to the following general requirements:

1. The overall shape, height or grade of any cut or fill slopes shall be developed utilizing contour grading in concert with existing natural contours and the scale of the natural terrain of the site.

2. Where two cut or fill slopes intersect, the intersection shall be horizontally rounded and blended.

3. The tops of cut and fill slopes shall be rounded vertically with a constant tangent (T) of ten feet (See Figure 2).

4. Where any cut or fill slopes intersect the natural grade, the intersection of each slope shall be vertically and/or horizontally rounded and blended with the natural contours so as to



present a natural slope appearance.

5. Where any cut or fill slope exceeds one hundred feet in horizontal length, the horizontal contours of the slope shall be developed in concert with existing natural contours.

6. The area of a site proposed to be graded shall be that which fits into the natural terrain and which allows for a minimal amount of grading. The ungraded area must be left in its natural form for the remainder of the site. No native vegetation shall be removed and no non-native vegetation shall be introduced or development of any kind shall be allowed within hillside areas not included as part of the graded pad area. The Zoning Administrator shall be responsible to determine the precise boundaries of the non-graded area to be retained as natural open space and an open space easement shall be recorded over this area. Portions of the non-graded area may be excluded from the natural open space easement by the Zoning Administrator based on factors specific to each lot, including whether the area is isolated from a meaningful area of contiguous open space and the absence of unique topographical or geological features. The intent of this provision is to create significant areas of contiguous open space and not to create small, isolated areas of open space. No change to the boundaries of the area determined to be placed in natural open space by the Zoning Administrator shall be made unless the Planning Commission determines that exceptional or special circumstances addressed in Chapter 17.32 Conditional Exceptions apply.

7. Structures shall be designed to fit with the contours of the hillside and relate to the overall form of the terrain. Structures shall be designed to fit into the hillside rather than altering the hillside to fit the structure.

8. Streets shall be designed to generally follow the natural contours and land form in order to minimize cut and fill.

9. Pad sizes for single family residential development shall be limited as follows:

Under 10% average natural slope within the area to be graded - No limit

10% to 15% average natural slope within the area to be graded - 27,000 square feet

15% to 30% average natural slope within the area to be graded - 21,000 square feet

30% to 40% average natural slope within the area to be graded - 18,000 square feet

Over 40% average natural slope - no grading per 19.28.020 A. 12.

The Zoning Administrator shall have the authority to increase or decrease the pad size category by up to 25% without a grading exception depending on the sensitivity of the site. Sensitivity shall be determined by such factors as the pad's visibility from the public right-of-way, its location on a ridgeline, the presence of habitat for sensitive species including rare, threatened, or endangered species, or the presence of unique topographic features such as knolls, valleys, rock outcroppings or other features or views. (Level padded area defined as area that is at a slope ratio of 5:1 or flatter).

10. Slopes having a ratio of 3.9:1 or steeper shall not exceed 20 feet in vertical height. Slopes having a 4:1 or flatter ratio may be up to twenty five feet in vertical height. The Zoning Administrator shall have the authority to increase vertical slope height by up to 25% without a grading exception depending on the sensitivity of the site. Sensitivity shall be determined by such factors as the slope's visibility from the public right-of-way, its location on a ridge line, the presence of habitat for sensitive species including rare, threatened, or endangered species, or the presence of unique topographic features such as knolls, valleys, rock outcroppings or other features or views. (Level padded area defined as area that is at a slope ratio of 5:1 or flatter).

11. Slopes requiring benches shall not normally be permitted.

12. No grading shall be permitted on slopes exceeding 40% unless findings can be made by the Planning Commission that exceptional or special circumstances as set forth in Chapter 17.32 Conditional Exceptions apply.

13. Driveway grading:

a. Shall not exceed fifteen feet in width.

b. Shall not exceed a fifteen percent finished grade unless otherwise approved by the Fire Department and Planning Director.

c. Driveway cut and fill slopes shall be subject to the same restrictions as identified in Chapter 17.28.

d. Driveway grading required to provide access to the level building pad area is not included as part of the total permitted level pad area.

14. Arroyo grading.

a. No development or grading of any kind shall be permitted within fifty feet of the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F. The Zoning Administrator shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area. Sensitivity shall be determined by such factors as the presence of riparian vegetation, habitat for rare or endangered species, significant rock outcroppings or other unique topographic features on the property proposed to be graded or in nearby segments of the same tributary.

b. The limits of these arroyos shall include all that land within the watercourse area, the adjacent slopes having an average natural slope of thirty percent or greater, and all other areas within the boundaries shown on Exhibits A-F.

c. No grading for private crossings of these arroyos shall be permitted. Grading for public street crossings must be limited to the minimum necessary for access and emergency access.

d. No native vegetation shall be removed and no non-native vegetation shall be introduced within the boundaries of these arroyos in areas that cannot be graded.

e. All land within the boundaries of these arroyos shall be included as an open space easement on final tract and parcel maps.

f. Where drainage structures enter these arroyos the structure must be blended into the natural terrain, and where necessary, lined with natural or quarried rock or other material as approved by the Planning Director and Public Works Director.

g. Where possible, other arroyos, shall be preserved as natural drainage courses. Significant natural features within these arroyos shall be preserved including riparian vegetation, boulders, rock outcroppings, milling features and deeply incised channels. These features shall be shown on the grading plans submitted for review. To insure that these areas are adequately preserved, an appropriate setback for development and grading may be applied.

h. Development or grading within blue line streams shall be limited to the minimum necessary for access or drainage structures. Any disturbance will require permits from the U.S. Corps of Engineers and the State Department of Fish and Game. (Ord. 6673 §§ 6, 7, 8, 9, 2003; Ord. 6453 § 1, 1998)

**Section 17.28.030 Dust Control/Erosion Control/Landscaping.**

A. Dust control. All grading activity shall comply with AQMD rules to control fugitive dust.

B. Erosion Control/Landscaping. The faces of cut and fill slopes which measure five feet or greater in vertical height shall be treated and maintained to control against erosion and protect the public health, safety, and welfare. This control shall consist of effective planting, and/or, check dams, cribbing, riprap other devices. Erosion controls shall be installed as soon as practical and prior to the final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

1. Landscape materials on graded slopes shall be designed to be compatible with adjacent natural vegetation and shall be suitable for the climatic, soil and ecological characteristics of the area. Plant materials that require excessive water after becoming

established should be avoided. Fire resistant and drought tolerant materials shall be selected wherever feasible.

2. Existing trees which have a six inch or greater trunk size at a point three feet above grade shall be accurately shown on the grading plan and shall be preserved in place whenever possible as determined by the Planning Director. (Ord. 6453 § 1, 1998)

## **Chapter 17.32**

### **CONDITIONAL EXCEPTIONS**

#### **Sections:**

|                  |   |
|------------------|---|
| <b>17.32.010</b> | <b>Conditional Exceptions.</b>          |
| <b>17.32.020</b> | <b>Application.</b>                     |
| <b>17.32.030</b> | <b>Referral to Planning Commission.</b> |
| <b>17.32.040</b> | <b>Notice.</b>                          |
| <b>17.32.050</b> | <b>Consideration of Exception.</b>      |
| <b>17.32.060</b> | <b>Appeals.</b>                         |
| <b>17.32.070</b> | <b>Hearing.</b>                         |

#### **Section 17.32.010 Conditional Exceptions.**

Generally. Conditional exceptions to the regulations contained in this chapter shall be permitted upon a finding by the Zoning Administrator that exceptional or special circumstances apply to the property. Such exceptional or special circumstances shall include such characteristics as unusual lot size, shape, or topography, drainage problems, or the impracticability of employing a conforming grading plan, by reason of prior existing recorded subdivisions or other characteristics of contiguous properties. (Ord. 6453 § 1, 1998)

#### **Section 17.32.020 Application.**

Application for the waiver of any requirement of this chapter shall be filed with the Planning Department prior to approval of the grading plan. The application shall be signed by the property owner or owner's representative using forms supplied by the Planning Department. The application shall contain information which demonstrates that there are exceptional or special circumstances that apply to the property that would prevent compliance with this title. The application shall substantiate the existence of exceptional or special circumstances by making the following findings:

A. That the strict application of the provisions of this Title would result in practical difficulties or unnecessary hardships inconsistent with the general purpose and intent of this Title;

B. That there are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood;

C. That the granting of a waiver will not be materially detrimental to the public welfare or injurious to the property or improvements in the zone or neighborhood in which the property is located.

The Zoning Administrator may require additional information if it is necessary to make a determination regarding the waiver request. The application shall be accompanied by a fee established by resolution of the City Council. A separate application shall be filed for each or grading project. (Ord. 6453 § 1, 1998)

#### **Section 17.32.030 Referral to Planning Commission.**

If at any time the Zoning Administrator believes that sufficient controversy or public interest may exist regarding a waiver application the waiver may be referred to Planning Commission for disposition. The Planning Commission may set the action for review at a public hearing if they so determine that it would be appropriate. (Ord. 6453 § 1, 1998)

#### **Section 17.32.040 Notice.**

Public notice of the consideration of a proposed waiver shall be provided by the Planning Department by mailing such notice to all owners of properties adjacent to the exterior boundaries of the property under consideration. The notice shall invite interested persons to

notify the Planning Department of any concerns or comments within ten days of the date of the notice. (Ord. 6453 § 1, 1998)

**Section 17.32.050 Consideration of Exception.**

In determining whether to grant or deny the application for exception to the requirements of this title, the Zoning Administrator or Planning Commission shall consider the property characteristics, comments received from surrounding property owners, the community, or other persons, hardships on the applicant, and any other adverse impacts imposed by the regulations contained in this title in its determination of findings of fact to support its decision concerning the request for exception. (Ord. 6453 § 1, 1998)

**Section 17.32.060 Appeals.**

An applicant may appeal the decision of the Zoning Administrator or Planning Commission within ten days of the determination. An appeal to the City Council shall be taken by filing a letter of appeal, in duplicate, with the Planning Department and by concurrently paying to such department a fee in the amount established by City Council resolution. Such letter of appeal shall set forth the grounds upon which the appeal is based. Within ten days after the receipt of the letter of appeal and the filing fee, the Planning Department shall transmit to the City Council the letter of appeal, the application and all other papers constituting the record upon which the action of the Planning Commission or Zoning Administrator was taken, together with a written report stating in what respects it was determined by the Commission or the Zoning Administrator that the application failed to meet the requirements of this Chapter. (Ord. 6453 § 1, 1998)

**Section 17.32.070 Hearing.**

The City Council shall conduct a hearing on such appeal and the City Clerk shall give notice of hearing in the same manner and for the same period of time as set forth in the notice provision for an application for a permit. The hearing shall be conducted upon the date set forth in such notice. Upon such appeal, the Council shall consider all of the matters transmitted to it by the Planning Department, together with all evidence properly received at such hearing. The City Council may affirm, reverse or modify the decision of the Commission or Zoning Administrator. In the event that the Council reverses the decision of the Commission or Zoning Administrator, and grants the permit such permit shall be placed, for the purposes of administration under the jurisdiction of the Commission or Zoning Administrator whichever originally considered the application for the grading permit. (Ord. 6453 § 1, 1998)

## **Chapter 17.36**

### **ENFORCEMENT/PENALTIES**

#### **Section:**

#### **17.36.010 Enforcement/Penalties.**

##### **Section 17.36.010 Enforcement/Penalties.**

A. Where grading is undertaken without a permit, the Public Works Director may order the work stopped by notice in writing served on any person or persons performing such grading or causing such grading to be done. Any such person or persons so notified shall stop such grading until all required permits are obtained.

B. Whenever any work for which a permit is required under the provisions of Chapter 17.12 of this title as determined by the Public Works Director has been commenced without the authorization of a City issued grading permit, the applicable grading permit fee shall be treble the amount of the regular fee as provided for in Chapter 17.24 of this title.

C. In addition to the administrative remedies and penalties imposed by the City Public Works Director pursuant to this title, any violation of this title may be punishable as an infraction, or as a misdemeanor at the discretion of the City Attorney as set forth at Section 16.04.510 of this title.

D. In addition to the requirements of this title, where grading of property is undertaken without required permits, the property owner may be required to restore the land to its pre-graded form or condition as determined by the Public Works Director.

E. The provisions of this title shall apply to all persons who do or cause to be done, or through action or inaction allow or maintain any grading regulated under this title to be done on property without a permit or in a manner contrary to the provisions of an approved grading permit or contrary to the provisions of this title. Persons who are responsible parties include but are not limited to:

1. Property owners or lessees.
2. Contractors who perform the work. (Ord. 6453 § 1, 1998)